

DETAILED ACTION

This Office action is in response to Applicant's amendment and request for reconsideration filed on January 14, 2010.

Claims 1-34, 36-37, 44-45, and 52-53 are canceled.

Claims 43, 46-51, and 54-56 are currently amended.

Claims 35, 38-43, 46-51, and 54-58 are pending.

Terminal Disclaimer

The terminal disclaimer filed on January 14, 2010 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent 7,487,513 has been reviewed and is accepted. The terminal disclaimer has been recorded.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

35. A method in an application server, comprising:

receiving, by the application server, a Web service archive including:

a Web service implementation having a plurality of Web service operations and
a plurality of Web service parameters, the Web service operations and

Web service parameters being independent of a runtime implementation requirements of the application server,

a Web service deployment descriptor specifying a mapping of the Web service operations and Web service parameters to the runtime implementation requirements of the application server, and

a first and second virtual interface, each to selectively expose a different subset of the Web service operations and the Web service parameters in the Web service implementation, wherein each of the first and second virtual interfaces are publishable as separate deployed Web service;

unpacking the Web service implementation, the Web service deployment descriptor, and the first and second virtual interfaces from the Web service archive into a directory within the application server; and

deploying each of the first and second virtual interfaces as separately published Web services within the application server based on the mapping specified by the Web service deployment descriptor.

43. A non-transitory system-readable medium having instructions stored thereon that, when executed by a processor in an application server, causes the application server to perform a method comprising:

receiving a Web service archive including:

a Web service implementation having a plurality of Web service operations and a plurality of Web service parameters, the Web service operations and Web service parameters being independent of runtime implementation requirements of the application server,

a Web service deployment descriptor specifying a mapping of the Web service operations and Web service parameters to the runtime implementation requirements of the application server, and

a first and second virtual interface, each to selectively expose a different subset of the Web service operations and the Web service parameters in the Web service implementation, wherein each of the first and second virtual interfaces are publishable as a separate deployed Web service;

unpacking the Web service implementation the Web service deployment descriptor, and the first and second virtual interfaces from the Web service archive into a directory within the application server; and

deploying each of the first and second virtual interfaces as separately published Web services within the application server based on the mapping specified by the Web service deployment descriptor.

46. The non-transitory system-readable medium of claim 43, wherein the method further comprises registering each of the deployed Web services with a Web services registry on the application server.

47. The non-transitory system-readable medium of claim 46, wherein registering each of the deployed Web services comprises automatically registering each of the deployed Web services with a Java Naming and Directory Interface (JNDI) of the application server.

48. The non-transitory system-readable medium of claim 43, wherein deploying each of the first and second virtual interfaces as separately published Web services within the application server comprises deploying the plurality of Web service operations and the

plurality of Web service parameters in a Web services container of the application server.

49. The non-transitory system-readable medium of claim 48, wherein the Web services container comprises a dedicated implementation container.

50. The non-transitory system-readable medium of claim 49, wherein the dedicated implementation container comprises an Enterprise Java Bean (EJB) container or a servlet container.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Spencer Hunter on authority and on behalf of Gregory D. Caldwell (Reg. #39,926) on March 18, 2010.

Allowable Subject Matter

Claims 35, 38-43, 46-51, 54-58 are allowed.

The following is an examiner's statement of reasons for allowance:

The prior art does not teach nor render obvious, in the specific combinations and manner recited within the claims, the features of:

receiving a Web service archive including, *inter alia*, a first and second virtual interface, each to selectively expose a different subset of the Web service operations and the Web service parameters in the Web service implementation,

wherein each of the first and second virtual interfaces are publishable as a separate deployed Web service;
unpacking the Web service implementation, the Web service deployment descriptor, and the first and second virtual interfaces from the Web service archive into a directory within the application server; and
deploying each of the first and second virtual interfaces as separately published Web services within the application server based on the mapping specified by the Web service deployment descriptor.

Closest Prior Art:

Williams et al. (US 2003/0055878) teaches a system for packaging web services into an archive file for distribution or deployment on the runtime platform on which the Web service will be based (see ¶0078) and subsequently publishing the web service to a UDDI registry (see ¶0083). However, Williams does not teach nor render obvious wherein the web service archive includes a first and second virtual interface which are deployed as separately published Web services within the application server based on the mapping specified by the Web service deployment descriptor.

Fletcher et al. (US 2003/0055878) teaches a system for creating new web services as aggregations of other services and/or software resources (see abstract and ¶0018). However, Fletcher does not teach nor render obvious receiving a Web service archive including, *inter alia*, a first and second virtual interface, each to selectively expose a

different subset of the Web service operations and the Web service parameters in the Web service implementation, wherein each of the first and second virtual interfaces are publishable as a separate deployed Web service; unpacking the Web service implementation, the Web service deployment descriptor, and the first and second virtual interfaces from the Web service archive into a directory within the application server; and deploying each of the first and second virtual interfaces as separately published Web services within the application server based on the mapping specified by the Web service deployment descriptor.

Finally, in view of Applicant's specification, see page 29, ¶10057, the examiner is interpreting the "application server" in claims 35, 38-42, 51, and 54-58 as being a "computing device" (i.e. NOT computer software *per se*).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRENDAN HIGA whose telephone number is (571)272-5823. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on (571)272-6776. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRENDAN HIGA/
Examiner, Art Unit 2453

/Joseph Thomas/
Supervisory Patent Examiner, Art Unit 2453